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| APPLICATION NO.                                                                   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/781,186                                                                        | 02/17/2004  | David A. Schmidt     | PC-P002US           | 1767             |
| 7590                                                                              | 06/27/2006  |                      | EXAMINER            |                  |
| Elizabeth R. Hall & Associates, P.C.<br>1722 Maryland Street<br>Houston, TX 77006 |             |                      | REIFSNYDER, DAVID A |                  |
|                                                                                   |             |                      | ART UNIT            | PAPER NUMBER     |
|                                                                                   |             |                      | 1723                |                  |

DATE MAILED: 06/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                     |                |
|------------------------------|---------------------|----------------|
| <b>Office Action Summary</b> | Application No.     | Applicant(s)   |
|                              | 10/781,186          | SCHMIDT ET AL. |
|                              | Examiner            | Art Unit       |
|                              | David A. Reifsnyder | 1723           |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 17 February 2004.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-40 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 17 February 2004 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/17/2004.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation of claim 5 of "The solids separation system of claim 6" is obviously a mistake; therefore, it is vague and indefinite as to what claim number the applicant actually intends to have claim 5 depend from. One way to correct this problem would be to change the recitation of "The solids separation system of claim 6" to ---The solids separation system of claim 4---.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gipson et al.

Regarding claims 1-40; Gipson et al. who disclose a process for removing solid particles from flowing fluids in an apparatus comprising a production well (11) connected to an end of an entry line (12) of a solids separation system, the solids separation system further comprising: a hydrocyclone (14) having an inlet connected to another end of the entry line (12), the entry line (12) having a valve; the hydrocyclone

(14) further including an overflow outlet connected to an overflow line (15) and an underflow solids outlet connected to an underflow solids line (17a), the overflow line (15) having a valve and the underflow solids line (17a) having multiple valves, with one of the valves being a choke valve. (Fig. 1)

Regarding claims 1, 2, 10-15, 17-22, 26-34 and 38-40; Gibson et al. discloses the claimed invention but fails to teach that his hydrocyclone (14) is the type as claimed in claims 1, 2, 10-15, 17-22, 26-34 and 38-40. It is considered that it would have been obvious to one having ordinary skill in the art at the time the invention was made that Gibson et al.'s hydrocyclone be of the type claimed in claims 1, 2, 10-15, 17-22, 26-34 and 38-40 since that type of hydrocyclone is conventional.

Regarding claim 3; Gibson et al. suggest the claimed invention as discussed above but fails to teach that his separation system is mounted on a frame. It is considered that it would have been obvious to one having ordinary skill in the art at the time of the invention to have mounted Gibson et al.'s separation system on a frame, because it is well known to mount things on a frame.

Regarding claim 4-6 and 16; Gibson et al. suggest the claimed invention as discussed above but fails to teach that his valves are of the type claimed in claims 4-6 and 16. It is considered that it would have been obvious to one having ordinary skill in the art at the time of the invention that Gibson et al.'s valves are of the type claimed in claims 4-6 and 16, because the type of valves claimed are conventional valves.

Regarding claims 7-9, 23-25 and 35-37; Gibson et al. suggest the claimed invention as discussed above but fails to teach the instantly claimed second inlet. It is

considered that it would have been obvious to one having ordinary skill in the art at the time of the invention for Gibson et al.'s hydrocyclone to have a plurality of inlets because a lot of hydrocyclones have a plurality of inlets. Furthermore, it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. St. Regis Paper Co. v. Bemis Co., 193 USPQ 8.

#### ***Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ford et al., who discloses a hydrocyclone, which includes many of the features of the applicant's hydrocyclone, but fails to teach that his hydrocyclone includes valves. Benzon, who discloses a hydrocyclone, which includes many of the features of the applicant's hydrocyclone including multiple inlets, but fails to teach that his hydrocyclone includes valves.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A. Reifsnyder whose telephone number is (571) 272-1145. The examiner can normally be reached on M-F 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda M. Walker can be reached on (571) 272-1151. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*David A Reifsnyder*  
David A Reifsnyder  
Primary Examiner  
Art Unit 1723

DAR